

Autonics

INDUCTIVE PROXIMITY SENSOR LONG CYLINDRICAL TYPE DC 2WIRE INSTRUCTION MANUAL



Thank you for choosing our Autonics product. Please read the following safety considerations before use.

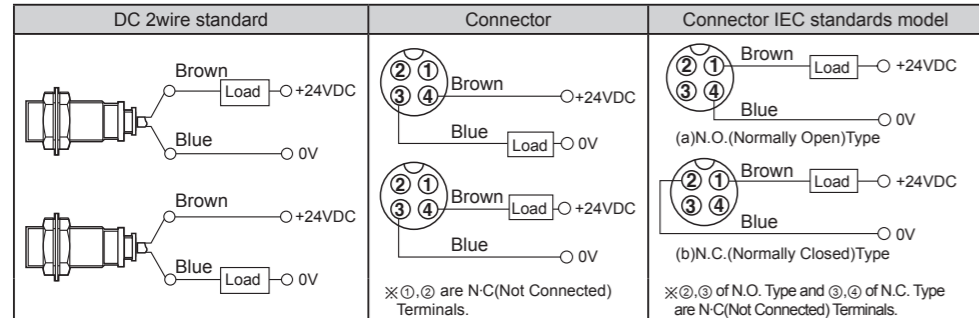
Safety Considerations

- Please observe all safety considerations for safe and proper product operation to avoid hazards. Warning Failure to follow these instructions may result in serious injury or death. Caution Failure to follow these instructions may result in personal injury or product damage. 1. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. 2. Do not disassemble or modify the unit. 3. Do not connect, repair, or inspect the unit while connected to a power source. 4. Check 'Connections' before wiring. Caution 1. Use the unit within the rated specifications. 2. Use dry cloth to clean the unit, and do not use water or organic solvent. 3. Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present. 4. Do not supply power without load.

Ordering Information

Table for ordering information with columns for Part Number (P, R, D, W, L, T, 18, 7, D, O, I), Cable type, Control output, Power supply, Standard sensing distance, Dimension, Body size, Connection, Feature, Shape, and Item.

Connections



Load can be wired to any direction. No need to consider polarity for non-polarity type of power supply.

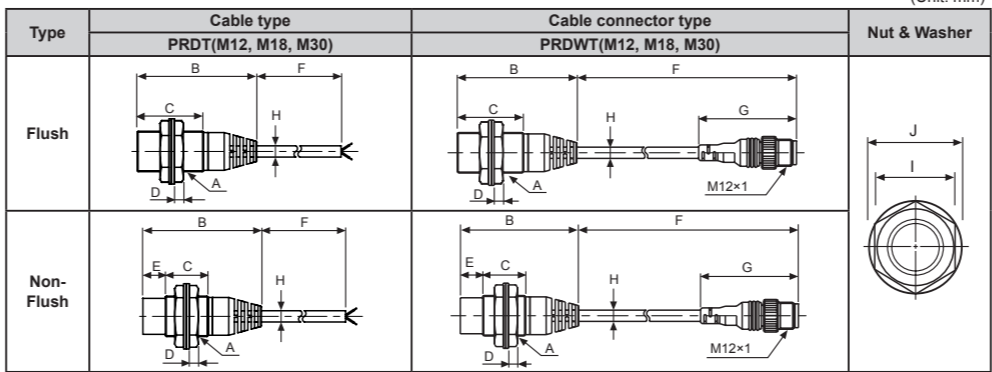
The above specifications are subject to change and some models may be discontinued without notice. Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

Specifications

Specifications table with columns for Model, Sensing distance, Hysteresis, Standard sensing target, Setting distance, Power supply, Leakage current, Response frequency, Residual voltage, Affection by Temp., Control output, Insulation resistance, Dielectric strength, Vibration, Shock, Indicator, Environment, Protection circuit, Protection, Cable type, Cable connector type, Materials, Approval, and Unit weight.

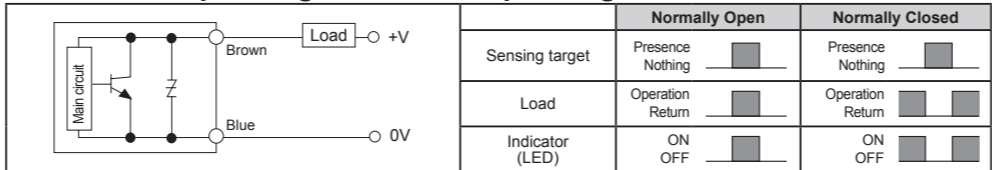
- The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target. Before using non-polarity type, check the condition of connected device because residual voltage is 5V. Do not pull the 4mm cable with a tensile strength of 30N or over and the 5mm cable with a tensile strength of 50N or over. It may result in fire due to the broken wire. When extending wire, use AWG22 cable or over within 200m. Condition for use in Environment is no freezing or condensation.

Dimensions



Dimensions table with columns for Type, Cable type, Cable connector type, and Nut & Washer, listing dimensions A, B, C, D, E, F, G, H, I, and J.

Control Output Diagram & Load Operating



Multi-interference & Influence by Surrounding Metals

Diagrams and text explaining mutual-interference and influence by surrounding metals. Includes diagrams for Face to Face and Parallel sensor arrangements, and a table of dimensions (A, B, l, Ød, m, n) for various models.

Setting Distance

Diagram illustrating setting distance (Sa) and sensing distance (Sn). Text explains that Sa is Sn multiplied by 0.7, and provides an example calculation for PRDT18-7DO.

Installation and Tightening Torque

Text describing installation and tightening torque. Includes a table for Strength (Front and Rear) and diagrams for Figure 1, Figure 2, and Figure 3.

Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents. 12-24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device. Use the product, after 0.8 sec of supplying power. Wire as short as possible and keep away from high voltage lines or power lines, to prevent surge and inductive noise. Do not use near the equipment which generates strong magnetic force or high frequency noise (transceiver, etc.). In case installing the product near the equipment which generates strong surge (motor, welding machine, etc.), use diode or varistor to remove surge. This unit may be used in the following environments: Indoors (in the environment condition rated in 'Specifications'), Altitude max. 2,000m, Pollution degree 2, Installation category II

Major Products

List of major products including Photoelectric Sensors, Temperature Controllers, Fiber Optic Sensors, Temperature/Humidity Transducers, Door Sensors, SSRs/Power Controllers, Door Side Sensors, Counters, Area Sensors, Timers, Proximity Sensors, Panel Meters, Pressure Sensors, Tachometers/Pulse(Rate) Meters, Rotary Encoders, Display Units, Connectors/Sockets, Sensor Controllers, Switching Mode Power Supplies, Control Switches/Lamps/Buzzers, I/O Terminal Blocks & Cables, Stepper Motors/Drivers/Motion Controllers, Graphic/Logic Panels, Field Network Devices, Laser Marking System(Fiber, CO2, Nd:YAG), and Laser Welding/Cutting System.

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